USAF Dental Investigation Service SUGGESTED LABORATORY EQUIPMENT and MATERIALS

All prices are subject to change. Current as of 20 April 04

Presentation Purpose

- Starting point when purchasing equipment and materials for the dental laboratory
- Products listed are only suggestions for purchase
- Products listed have been evaluated by DIS or have been previously used by the federal dental services

Links are provided

- Click on the pictures or the yellow links throughout the presentation for additional information on the products.
- The information provided is not an endorsement of the products by DIS or the US Federal Government.
- All prices listed are government cost unless otherwise stated.
- To review the DIS rating system please click here

Index

- Removable Equipment and Products
- Common Equipment and Products

Removable Equipment and Products

- Acrylics
- Acrylic Teeth
- Flask Press
- Boilout/Curing Units
- Shell Blaster

Denture Base Acrylic

Characterized Lucitone

- Easy to use
- Good handling characteristics
- Good strength
- Various shades
- Cost per denture
  - $6.21 (21g pkgs)
  - $4.39 per denture (50-unit bulk pkg)

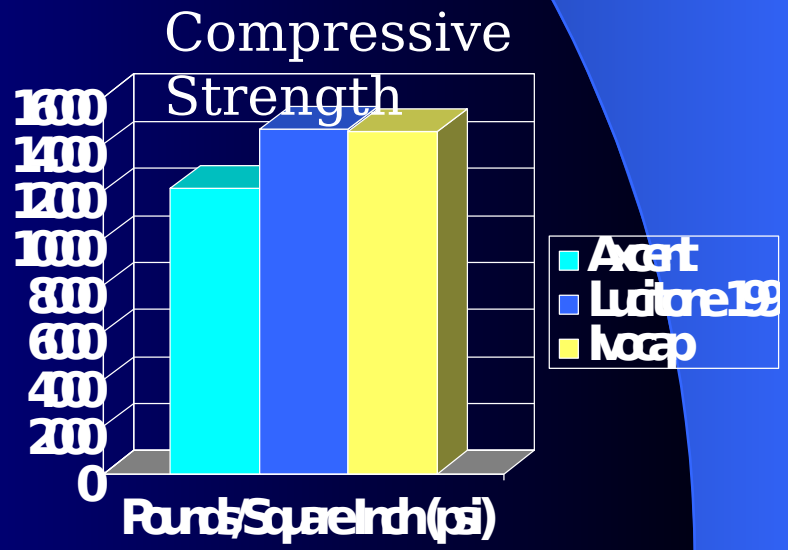
Lucitone 199

- High impact strength
- Can use Success Injection System
- Cost per denture - $2.37 (30-unit pkg)

Denture Base Acrylic

Axcent 15-Minute Acrylic

- Fast 15-min curing time
- Good tooth bonding strength
- Various shades
- Cost per denture - $4.30
- Rated **Acceptable**



Acrylic Teeth

Dentsply Trubyte - IPN_

- Available in Vita® and Bioform shades
- Available in 40º, 33º, 22º, 20º, 10º, 0º posterior teeth sets of 8
- Anteriors 1x6 ($20.51)
- Posteriors 1x8 ($10.19)

Acrylic Teeth

Ivoclar Vivadent – BlueLine

- Available in all 16 A-D and bleach shades
- Incorporates full spectrum of occlusal schemes – lingualized, monoplane, fully anatomic, semi-anatomic
- Anteriors 1x6 ($16.96)
- Posteriors 1x8 ($9.80)

Vivodent DCL Ortholingual DCL

Orthoplane DCL

Flask Press

Nevin Hydraulic Press

- Allows for slow closure of flasks
- Can hold several flasks at once
- Hydraulic pump with handle, no air pressure required
- $690

Boilout/Curing Units

Electric Units

- Programmable, easy to use
- Harder to clean with heating element in the water bath
- Heats slower than gas
- For smaller removable workloads

Nevin 5400

Nevin 5400

- Programmable for 2 stage curing
- Programmable for delayed start and length of time for each curing cycle ($2,811)

Wasserman- WAPO-EX - ($4,028)

WAPO-EX

Boilout/Curing Units (cont.)

Handler Gas-Heated Boilout Unit

- Easy to use & clean
- Heats up quickly
- Reliable
- For heavier removable workloads
- $3,787

Handler 26105
Boilout/Washout/Curing Unit

Curing Units_

Nevin 4900 - ($1,317)

- Programmable for 2 curing temperature plateaus
- Programmable for delayed start and length of time for each curing style

Wassermann - WAPO-MAT

- Programmable
- Easy to use and clean ($1,698)

Nevin 4900

WAPO-MAT

Shellblaster

Vaniman – Sandshell XL

- For labs with medium to heavy removable workload
- Space-saving walnut shellblaster system
- Fully sealed, operates with or without dust collector
- $356

Common Equipment and Products

- Model Trimmer
- Vacuum Mixer
- Electric Handpieces
- Bench Lathes
- Steam Cleaners
- Work Benches
- Lab Chairs
- Lab Software

Model Trimmer

Renfert MTplus

- Wet/Dry trimmer
- 2-hp engine
- Tool-free adjustments
- $966 – MTplus with Marathon wheel
- Rated **Recommended** by DIS as a wet trimmer and **Acceptable** as a dry trimmer

Vacuum Mixer

Renfert Twister Pro

- 5 program settings, for different materials
- Adjustable mixing time
- Speed adjustable from 150 to 600 RPM
- Prevacuum & post vacuum
- HP automatically adjusts to heavy or light materials
- Automatically reverses rotation
- $1,175

Rated **Recommended** by DIS

Vacuum Mixer

Whip Mix Pro Blend Mixer

- Provides consistent, automatic, and hands-free mixing
- Hands-free mixing frees up user
- Controls are easy to operate and intuitive
- Has two mounting configurations, wall or benchtop
- $1,284.60
- Rated **Acceptable** by DIS

Electric Handpieces

Brushless Handpiece Motors

- Quieter, run smoother
- Sealed, do not require vents for cooling and are
- Virtually maintenance free
- Higher torque ratings enable more pressure during use without affecting the motor's speed
- See Synopsis of Laboratory Handpieces on the DIS website for more information

Electric Handpieces (cont.)

Osada EXL-M40

- 1,000 to 40,000 rpm
- Reported torque of 4.8 Ncm, and maximum torque of 8 Ncm at 30,000 rpm
- Auto-cruise or variable-speed foot control
- Easy lever-chuck release
- Brushless motor
- Rated **Acceptable** by DIS

Bench Lathes

Handler Red Wing

- Reliable! Heavy-duty bench top lathe
- Two-speed
- $409

———

Foredom BL-1A

- A small, lightweight bench top lathe with suction cup feet (secure to bench top for optimal use)
- Best indicated for tasks requiring few bur changes
- Variable speed ($219)
- Rated **Acceptable** by DIS

Steam Cleaners

Emmevi Aqua Steam Cleaner

- Stainless steel
- Well-insulated
- Adjustable pressure
- No water level gauge
- $699

Rated Recommended by DIS for use in small- to medium-size dental laboratories

Work Stations

Kavo MASTERspace Classic

- Electrical outlets on bench top
- Semi-automatic suction unit with 5-speeds and auto start with handpiece
- Techdent top – 48” x 24”
- Retractable air hose
- Good lighting
- Ergonomic
- $4,438
- Rated **Acceptable** by DIS

Work Stations (cont.)

Nevin Ergotech 9748

- Self-contained & ergonomic
- Variable-speed suction unit, auto start with handpiece
- **Corian top**
  - 48” x 24” or 42” x 24”
- Solidly built
- Electrical outlets below bench top
- Good lighting
- Built-in air hose
- $3,759
- Rated **Acceptable** by DIS

Chairs

Kavo SENsit Laboratory Chair

- Adjustable and maneuverable
- Synchronized backrest/seat tilt
- Lockable adjustment mechanisms
- Optional armrest
- $556 (without armrests)
  $703 (with armrests)
- Rated **Acceptable** by DIS

Chairs (cont.)

Nevin Ergonomic Laboratory Chair (#730)

- Urethane upholstery over a soft foam cushion
- 5-legged nylon-composite base
- Formed-steel seat pan, durable structural integrity
- Designed to stand up to rugged and harsh environments
- $266

Chairs (cont.)

BioFit BTN/1Q-CAB

- 5 legged base for stability
- Adjustments for: backrest height and tilt, seat height for comfort and control
- Adjustable foot ring (not shown)
- Large back (not shown)
- Wheels (not shown)
- $350 w/o arms
- $414 with arms

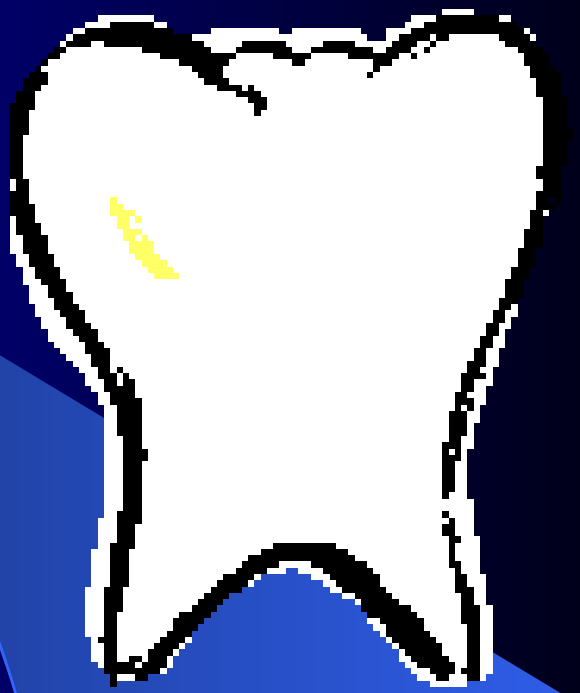
Software Programs

Bitton Lab Database Plus

- Designed specifically for government dental labs by a former Air Force lab tech
- DWLV tracking capabilities
- ADL case manager built in
- Quality control feature
- Free technical support
- $299

Fixed Equipment and Products

- Microblasters
- Porcelain Ovens
- Burnout Ovens
- Microscopes
- Die Pinning System
- Casting Machines
- Porcelain



Microblasters

Many options available:

- Choose from number of tanks
- Air pressure adjustment location
- See Synopsis of Laboratory Air-Abrasion Units on the DIS website

Renfert Basic M[illegible]er

Vaniman Sandstorm Expert

Porcelain Ovens

Ivoclar Vivadent Programat P100

- Electronic vacuum control system helps prevent firing errors if vacuum is set incorrectly
- $3,876 w/pump

———

Jelrus VIP Vision 300

- User friendly
- Keypad let's you "Name That Program" from A-Z
- $2,399

Porcelain Ovens (cont.)

VITA VACUMAT 4000

- Two thermocouples within the chamber provide better temperature control
- Automatic temperature calibration after 100 hours of usage
- Internal memory for up to 500 programs
- Portable, detachable keypad
- $5,836.50

Porcelain Ovens (cont.)

Whip Mix Pro Series

- Fast-cool feature
- Pressing furnace has advanced cycles for Inceram, Procera, pressing and porcelain firing
- Pro Press 100 - $3,351
- Pro 100 - $2,500

Burnout Ovens

Whip Mix Apollo II

- Unique feature is its bottom loading lift platform that raises and lowers investment rings
- Has an optional foot-control switch
- Reduced heat blast
- $1,280

The **Apollo II** is rated **Recommended** by DIS

Microscopes

Meiji BM

- Dependable and inexpensive
- Easily adjustable
- $549

———

Renfert Mobiloscope

- Swivel arm microscope
- Space saving
- $1,111
- $1,438 w/fiber optic light

Meiji BM

Renfert Mobiloscope

Microscopes (cont.)

Nikon SMZ-645

- Versatile lab microscope
- $2,141 w/fiber optic ring light and light source

Die Pinning Systems

Renfert TopSpin

- Tool-free drill bit replacement
- Two working positions via swivel foot on base
- $599

———

Whaledent Pindex

- Foot-controlled or Hand-controlled
- Both are laser guided
- $599

Casting Machines

KerrLab Centrifico

- Reliable broken-arm casting machine
- Easy to use
- $479.50

Induction Casting Machines

Dentsply Ceramco Super Cascom

- 100 program digital memory
- Vacuum/pressure assisted casting
- $15,000 retail price

———

Bego Fornax T

- Compact design
- Short heating time due to infrared controller
- $12,473 retail price

Porcelain

Ivoclar IPS d.Sign Porcelain

- Produces esthetic restorations
- Mixes easily with minimal slumping
- Comparable price to other porcelain systems used in the USAF (basic system- $717)
- Rated **Acceptable** by DIS

Porcelain

Vita Omega 900-3D

- Low-fusing ceramic
- Used for crowns, bridges, laminates
- Reportedly compatible with wide variety of metals
- Wear is reportedly similar to natural teeth
- Standard kit - $1,696.00

Contact Information

- MSgt Samuel D. Williams
  - sdwilliams@nidbr.med.navy.mil
  - Comm: (847) 688-7669
  - DSN: 792-7669